RECEIVED
CENTRAL FAX CENTER
JUN 11 2007

IN THE CLAIMS:

Please amend claims 1-29 as follows:

1. (original) A method of determining beam quality (BQ) of a laser beam, comprising:
providing a reference value from a theoretical Gaussian laser beam;
determining, for the laser beam, a measured value corresponding to the reference; and
comparing the measured value with the reference value to obtain the beam quality of the laser beam.

2. (original) The method of Claim 1, wherein the reference value is approximately $1-e^{-2}$.

3. (original) The method of Claim 1, wherein the measured value is a normalized power received in approximately the same area as the Gaussian beam for the reference value.

4. (original) The method of Claim 1, wherein the determining comprises measuring the power from the laser beam through an opening having a first diameter corresponding to twice the far-field waist size ω_f of Gaussian laser beam.

5. (original) The method of Claim 4, further comprising normalizing the measured power.

6. (original) The method of Claim 5, wherein the normalizing comprises dividing the measured power by a measured power of the laser beam without an opening.

7. (original) The method of Claim 1, wherein the determining comprises:
measuring power from the laser beam through openings having diameters different than the first diameter;
normalizing the measured powers; and
determining the measured value from the normalized measured powers.

LAW OFFICES OF
MACPHERSON KWOK CHEN & HEID LLP
2402 MICHELSON DRIVE
SUITE 210
IRVINE CA 92612
(949) 752-7040
FAX (408) 392-9262

8. (original) The method of Claim 7, wherein the number of measured powers is at least three.

9. (original) The method of Claim 1, wherein the measured value is measured approximately one focal length away from a transform lens.

10. (original) The method of Claim 1, wherein the comparing comprises calculating the square root of the reference value divided by the measured value.

11. (currently amended) The method of Claim 1, wherein the measured value corresponds to twice a square root of the second moment of intensity of the laser beam.

12. (original) The method of Claim 1, wherein the laser beam can be at least two different types of laser beams.

13. (original) The method of Claim 12, wherein the different types of laser beams comprises Gaussian, top hat, super Gaussian, transverse modes, and combinations of transverse modes.

14. (original) The method of Claim 1, wherein the laser beam may be selected by all different types of laser beams.

15. (withdrawn).

16. (withdrawn).

17. (withdrawn).

18. (withdrawn).

LAW OFFICES OF
MACPHERSON KWOK CHEN & HEID LLP
2402 MICHELSON DRIVE
SUITE 210
IRVINE CA 92612
(949) 752-7040
FAX (408) 392-9262

19. (withdrawn).

20. (withdrawn).

21. (withdrawn).

22. (withdrawn).

23. (withdrawn).

24. (withdrawn).

25. (withdrawn).

26. (withdrawn).

27. (original) A machine-readable medium storing instructions executable by a processor for determining a measure of quality of a laser beam, the instructions having operations comprising:

providing a reference value from a theoretical Gaussian laser beam;

determining, for a test laser beam, a measured value corresponding to the reference; and

comparing the measured value with the reference value to obtain a beam quality of the test laser beam.

28. (original) The medium of Claim 27, wherein the reference value is approximately $1-e^{-2}$.

LAW OFFICES OF
MACPHERSON KWOK CHEN & HEID LLP
2402 MICHELSON DRIVE
SUITE 210
IRVINE CA 92612
(949) 752-7040
FAX (408) 392-9262

29. (original) The medium of Claim 27, wherein the test laser beam can be at least two different types of laser beams.